

REMARKS

Claims 1-13 have been amended without prejudice to clarify the definition and new claim 14 added to distinguish more clearly over the cited Behl patent.

Reconsideration of the rejection on the Behl patent under §102(b) and allowance of the claims are respectfully solicited in view of the following remarks.

With respect to the original claims, the Examiner relied on the Behl patent, in particular, Figs. 10-12. The Behl patent describes a form of catheter designed to be inserted into a vascular vessel and used to collapse the vessel by a linear motion that spreads outwardly extendable electrodes. An important teaching in the Behl patent, for its application, is that the electrodes 112 when extended are needle-type electrodes in which the electrosurgical currents if any (considering how far apart they are in the extended position-Fig.11c) flow in all directions out in the forward direction. While there may be some minor emission as well, perhaps, in a sideways direction, since electrosurgical currents concentrate at singularities, such as points, likely most of the emissions are from the end points.

In the applicants' invention, the electrodes are provided side-by-side on their support with adjacent edges such that any electrosurgical currents are directed primarily sideways between the adjacent edges. This is important for an important application of the invention, namely, treating spinal ailments, wherein it is important that the surgeon can selectively shrink and/or modulate only certain sides of tissue and protect other sides as well as tissue in front from being exposed, possibly harmfully, to the electrosurgical currents.

It is also pointed out, as recited in claims 1-13, that the tube supporting the electrodes is flexible. Thus, the extendable end can be caused to assume different configurations to access tissue not directly accessible by way of a cannula. As exemplified in Fig. 10 of Behl, it cannot be asserted that Behl discloses side-by-side electrodes mounted on a flexible tubular end. In Behl, the action by the user is not to change the position of 106, but to extend apart electrodes 112 to collapse the surrounding blood vessel.

Hence, it is submitted that claim 1 is clearly not met by the Behl patent.

There are additional important distinctions in others of the pending claims. For example, claims 2-7 recite that the electrodes are spaced apart longitudinally along the tubular end. In Behl, the two electrodes 112 project forwardly and are clearly not spaced apart longitudinally.

Claim 8 recites that the two electrodes are spaced apart circumferentially, again a teaching clearly lacking in Behl.

Claims 9-13 further recite, in addition to some of the features outlined above, that the assembly comprises a handle connected such that when the handle is squeezed the tube with the electrodes is extended. Behl teaches nothing similar.

New claim 14 has also been added. The claim is somewhat different from the previous claims but nevertheless recites clear distinctions with respect to the Behl patent. In particular, claim 14 recites that the first and second spaced exposed electrodes are mounted side-by-side on the tubular side of the first member at its second end and are connected respectively to the first and second wires such that when a bipolar voltage is applied to the first and second wires electrosurgical currents are generated primarily sideways between adjacent edges of the first and second electrodes. Again, it is not possible in Behl to achieve this mode of operation. There is no way in the Behl construction, for the Behl purpose, to localize the electrosurgical currents to a side of the tubular end between the edges of side-by-side electrodes.

The differences between Behl and a feature of the present invention are emphasized in an important application of a feature of the present invention illustrated in Fig. 1 of the instant drawings. The user, typically a surgeon, squeezing the handle, can cause the end 19 to change direction. This is especially important in spinal surgery, where the vertebrae make it difficult if not impossible by means of MIS to reach with the electrodes certain tissue locations at the surgical site. Using the instrument of the invention, the tube housing the electrodes can be inserted at one location, and then the end with the active electrodes bent to access another location perhaps behind a bone. A feature of the present invention is that the active electrodes, instead of being forwardly-projecting needles as in Behl, are mounted on the side of the extendable tube, with the result that the electrosurgical discharge occurs at the side, radially outwards, not at the ends. This is the basis for calling one form of the instrument of the invention a side-firing flexible tip system.

Behl's construction is not only different, but was designed to serve an entirely different purpose. Simply put, the Behl instrument could not perform many of the functions required of the instrument of the invention.

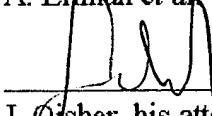
For these reasons, it is submitted that the amended claims 1-13 and new claim 14 are clearly patentable over the cited art and should be allowed.

For completeness' sake, it is noted that new formal drawings were submitted on or about 8/3/04. It would be appreciated if the Examiner would acknowledge their receipt and her approval.

Favorable action on the merits is earnestly solicited.

Respectfully submitted

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